

Appl. No. 10/577,365
Amendment dated 11/13/2008
Reply to Office Action of 06/13/2008

Remarks

Oath/Declaration

This application is a U.S. national stage filing under 35 U.S.C. §371 of PCT Application No. PCT/US2004/032518 filed on October 4, 2004, which claims the benefit of U.S. Provisional Patent Application No. 60/525542.

Applicant believes the declaration submitted with PCT/US2004/032518 was proper, as filed with the PCT application.

Election/Restrictions

The application was asserted to contain claims directed to more than one species of the generic invention, as indicated on page 2 of the 6/13/2008 office action.

Applicant affirms provisional election of species to (i) the hydroxy endblocked siloxane oligomer composition step of claims 1 and 8.

Claim Objections

The numbering of the previously submitted claims was not in accordance with 37 CFR 1.126. In particular, claim 14 was missing.

Applicant has cancelled previously numbered claims 15 and 16. Claims 1 – 13 remain in the application.

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Rejections under 35 U.S.C. 103

Claims 1-3, 5-6, and 15-16 were rejected as being unpatentable over Gee (US 6,316,541) in view of Tamori et al. (EP 1172412).

Applicant respectfully submits that the instant claims define an invention which is unobvious over Gee in view of Tamori.

Applicant respectfully submits the 103 rejection does not provide a sufficient factual inquiry of obviousness as stated in *Graham v. John Deere Co.*, and further described in the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of the Supreme Court Decision in *KSR v. Teleflex Inc.* (Federal Register/Vol. 72, No. 195, pages 57526-57535). In particular, Applicant respectfully submits the above rejection fails to determine the scope and content of the prior art, and subsequently fails to ascertain the differences between the claimed invention and the prior art. Applicant therefore respectfully submits that the above rejection fails to establish a prima facie case of obviousness.

Applicant agrees that Gee indeed teaches a method for making polysiloxane emulsions using emulsion polymerization but does not disclose adding to its emulsions or processes components for preparing an emulsion containing an organic polymer by free radical emulsion polymerization of one or more ethylenically unsaturated organic monomers.

The 6-13/2008 rejection relies on the teaching of Tamori for its method of producing aqueous dispersions by emulsifying at least one organosilane, a hydrolyzate of the organosilane, or a condensate of the organosilane with a radical polymerizable vinyl monomer. However, Tamori emphasizes the formation of an emulsion (or emulsion particles) containing a silicone-organic polymer (resin) that is primarily an interpenetrating network (as found in [0014] in Tamori, reproduced below for convenience).

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[0014] The aqueous dispersion of the present invention has the following advantages which have never been obtained by conventional known methods:

(1) Vinyl monomer (B) is polymerized in an emulsion particle in the presence of component (A), a siloxane component, so that the siloxane component and the vinyl polymer form an interpenetrating network (IPN) structure.

Tamori further emphasizes a method where its siloxane component (A) and vinyl monomer (B) are first combined and reacted, as indicated in [0050], reproduced below.

[0050] The aqueous dispersion of the present invention is obtained by emulsifying a mixture containing the above-mentioned component (A) and component (B) in the presence of water, an emulsifier and optionally hydrolytic/condensation catalyst (D), and then, adding a radical polymerization initiator and optionally hydrolytic/condensation catalyst (D) to conduct hydrolysis/condensation and radical polymerization.

By contrast, present claims 1 and 8 require first the formation of an emulsion wherein the siloxane component has reacted to form a silicone polymer. Subsequently, claim 1 then describes:

(ii) adding to the emulsion in (i) components for preparing an emulsion containing an organic polymer by free radical emulsion polymerization of one or more ethylenically unsaturated organic monomers;
and claim 8 describes;

(ii) preparing a second emulsion containing an organic polymer by free radical emulsion polymerization of an ethylenically unsaturated organic monomer; and
combining the first and second emulsions.

Thus, neither claim 1 or 8 encompass the method of Tamori wherein a siloxane component and ethylenically unsaturated organic monomers are combined before emulsification (that is within the same emulsion particles).

The present invention is directed to the formation of hybrid or alloy emulsions. The present emulsions can be characterized as containing a silicone organic alloy, in other words, an immiscible mixture of two polymers, i.e., a silicone polymer and an organic polymer within each polymer particle. By contrast, the prior art methods

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described above provide emulsions of a single copolymer of a siloxane and an organic acrylate monomer.

Applicant respectfully submits that the 6/13/2008 rejection fails to account for these differences and therefore does not provide a sufficient factual inquiry of obviousness as stated in *Graham v. John Deere Co.*

Applicant further submits that the combination of Gee and Tamori fails the teaching/suggestion/motivation to combine test. There is no teaching or suggestion in Gee to add to its emulsions) either an emulsion (as per claim 8) or components for preparing an emulsion (as per claim 1) containing an organic polymer by free radical emulsion polymerization of one or more ethylenically unsaturated organic monomers. Conversely, starting with Tamori, there is no teaching or suggesting to modify its method to first prepare an emulsion of a silicone polymer, followed by addition of an emulsion (as per claim 1) containing an organic polymer by free radical emulsion polymerization of one or more ethylenically unsaturated organic monomers. Rather, Tamori teaches interpenetrating silicone-organic polymer networks, emphasizing first mixing a siloxane component with an organic component. In this respect, Tamori may be viewed as *teaching away* from the present processes as claimed. Thus, Applicant believes the 6/13/2008 rejection fails to establish a prima facie case of obviousness against the instant claims.

Claims 8-11 and 13 were rejected as being unpatentable over Tamori in view of Gee.

Claims 4, 7 and 12 were also rejected as being unpatentable in similar rejections, but relying on further combination of Van Acrt (EP 1217070), Hyde (US2,891,920) respectively.

Applicant relies on submitted arguments that the present claims are non-obvious in view of Gee and Tamori, and therefore believes these further rejections are mooted.

The rejections to claims 15 and 16 are moot since Applicant has canceled these claims.

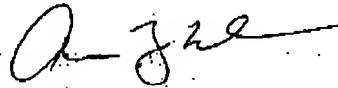
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The present response is being submitted within the statutory period for response to the outstanding Office Action. Applicant authorizes the USPTO to charge deposit account 04-1520 for a two month extension, and any additional fees that should be necessary to maintain the pendency of the application.

In view of the above, it is respectfully submitted that the claims are in condition for allowance. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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